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FEDERAL COMMUNICATIONS COMMISSION  
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Before the  
**FEDERAL COMMUNICATIONS COMMISSION**  
Washington, D.C. 20554

In the Matter of )

Amendment of Section 2.106 of the )  
Commission's Rules to Allocate )  
Spectrum at 2 GHz for Use by the )  
Mobile-Satellite Service )

ET Docket No. 95-18

**COMMENTS OF CONSTELLATION COMMUNICATIONS, INC.**

Constellation Communications, Inc. ("Constellation"), by counsel, hereby submits its comments on the Third Notice of Proposed Rulemaking ("*Notice*") in the above-captioned proceeding. In these comments Constellation proposes a rational process for accommodating the Broadcast Auxiliary Service ("BAS"), Fixed Service Microwave licensees ("FS Microwave") and the Mobile Satellite Service ("MSS") in various 2 GHz bands.

**BACKGROUND**

In its *Notice*, the Commission seeks comments on several issues relating to the introduction of MSS in the 2 GHz band. First, the Commission proposes to reallocate the 2110-2150 MHz band for assignment to Fixed and Mobile Services by competitive bidding. Second, in conjunction with the Commission's desire to accommodate MSS in the 1990-2025 MHz band, the Commission proposes to reallocate 85 MHz of spectrum for BAS at 2025-2110 MHz. Third, the Commission seeks comments on methods for relocation of existing BAS licensees in the 1990-2110 MHz band. Finally, the Commission seeks comment on proposals for the relocation of FS Microwave licensees in the 2110-2150 MHz and 2165-2200 MHz bands.

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**I. The Commission Should Develop a Rational Means for Accommodating the MSS, BAS and FS Microwave Licensees in the 2 GHz Bands**

Constellation has pending before the Commission an application for a 2 GHz MSS system and therefore has a vital interest in the outcome of this proceeding. Constellation believes that it would be inappropriate for the Commission to specify the details of any relocation compensation procedure to be imposed on the MSS until after the Commission has granted licenses to the pending 2 GHz MSS applicants. This is because the basic issues that will affect the relocation process cannot be resolved until it is determined: (1) how many MSS licenses will be issued; (2) whether licensees will be sharing spectrum; (3) the difference in sharing conditions for different transmission techniques (e.g. TDMA vs. CDMA); and (4) the timing of system implementation (e.g. ICO who is currently constructing its system pursuant to a U.K. authorization vs. U.S. applicants who will not begin construction until after licenses are issued by the Commission). For example, a CDMA system should not be required to contribute to the relocation of an existing system if the relocation is necessary to accommodate a TDMA system rather than the CDMA system itself. This is true even though both MSS systems might be assigned frequencies that overlap the assigned frequency of the existing system. Similarly, a system operator such as ICO, which is ready to implement its system in the near future, should not be allowed to dictate the relocation schedule more appropriate to a U.S. licensee who will not begin system construction until after the Commission issues system licenses. Moreover, different systems may have different perceptions of the need for the relocation of a particular facility based on differences in technical considerations or market assessments.

Irrespective of the above, Constellation does believe that the Commission can begin developing the parameters of the transition by deciding now on such issues as a sunset date and the applicability of good faith bargaining provisions.

## **II. BAS Implementation in the 2025-2110 MHz Band**

The Commission has determined that the BAS and MSS cannot share the same spectrum and is proposing a modified BAS allocation that would provide 85 MHz of spectrum for BAS in the 2025-2110 MHz band.<sup>1</sup> Implementation of this allocation would require retuning or refitting of existing equipment to reduce bandwidth or to convert to digital transmission techniques. In the *Notice*, the Commission concluded that the current complement of seven BAS channels could be accommodated within the proposed 85 MHz allocation with analog transmission.<sup>2</sup> If all BAS facilities were converted to digital transmission, it might be feasible to increase to nine the complement of BAS channels in the band.<sup>3</sup> Such an approach would not only accommodate existing licensees but would provide for growth potential for additional BAS facilities.

It is clear that the broadcast industry facilities are rapidly being converted to digital formats for transmission and distribution and that substantial bandwidth compression is available through industry standard techniques. Consequently, Constellation believes that any permanent channelization of the proposed BAS band should be done on the basis of digital transmission techniques to maximize the number of BAS channels available.

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<sup>1</sup> *Notice* at ¶ 32.

<sup>2</sup> *Id.*

<sup>3</sup> The Commission indicates that it is possible to transmit digital signals in a bandwidth of less than 10 MHz. *Id.* Nine BAS channels could be accommodated in an 85 MHz allocation if the bandwidth of each channel was less than 9.5 MHz.

Although the Commission should specify a date certain by which all BAS facilities must be replaced to be compliant with the new channelization plan, Constellation does not believe it necessary that all BAS facilities accomplish such a conversion on the same date.<sup>4</sup> Rather Constellation believes that a transition plan should be established under which BAS facilities would be converted to digital transmission schemes while MSS systems were being placed into service.

The schedule for this transition plan is related to a number of other dates addressed in the *Notice*. These are the dates for defining the beginning of the voluntary and mandatory negotiation periods<sup>5</sup> and the sunset date<sup>6</sup> after which MSS licensees will not be responsible for any relocation expenses. In setting these dates, Constellation believes that the Commission should carefully consider all of the specific factors involved in this particular allocation proceeding in adopting an optimum approach to accommodating the interests of all parties involved.

In particular, Constellation notes the following factors arising in this allocation proposal: (1) a substantial portion of the previous BAS allocation is retained under the proposed allocation which can allow a long transition period for existing BAS facilities, particularly in areas where demand is light; (2) even if licenses are issued to MSS systems in the year 2000, the earliest most MSS applicants could have their systems operational is in the 2003 to 2005 time frame; (3) a BAS channelization plan based on digital transmission will benefit the broadcasting industry by making more BAS channels available and should be adopted as the basis for the long-term channelization

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<sup>4</sup> *Id.* at ¶ 39.

<sup>5</sup> *Id.* at ¶ 44.

<sup>6</sup> *Id.* at ¶ 45.

of the 2025-2110 MHz band; and (4) a transition plan that minimizes the impact on MSS and BAS cannot be established until the Commission adopts its 2 GHz MSS licensing rules.

Given these considerations, Constellation recommends the following course of action to implement the proposed 2025-2110 MHz BAS allocation. First, the Commission should adopt a long-term channelization plan for the 2025-2110 MHz band based on digital transmission techniques. Such a plan would provide either nine BAS channels with a bandwidth of about 9.5 MHz or ten BAS channels with a bandwidth of 8.5 MHz. Second, it will be necessary to establish an implementation date for the digital transmission channelization plan, which would also be the sunset date after which new entrants will not be liable for any relocation expenses. Such a date should be no later than ten years after July 22, 1997 which is the date on which the Commission began accepting MSS applications.<sup>7</sup> The BAS licensees have been on notice since the conclusion of the 1992 World Administrative Radio Conference (“WARC-92”) that the national BAS allocation would be modified to require some degree of retuning or refitting of BAS facilities and that the MSS would be allocated a portion of the BAS allocation. Moreover, on January 31, 1995, the Commission released a Notice of Proposed Rulemaking<sup>8</sup> proposing BAS re-allocation. Moreover, it would not be prudent to unnecessarily delay the implementation of a digital BAS channelization plan that would provide additional BAS channels. Thus, Constellation recommends that January 31, 2005 be set as the sunset date for BAS relocation, which is ten years from the initial proposal to reallocate BAS spectrum. For the reasons set forth below, these dates should not be tied to the start

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<sup>7</sup> *Id.* at ¶ 44.

<sup>8</sup> *See Notice of Proposed Rulemaking* in ET Docket No. 95-18, rel. Jan. 31, 1995.

of the voluntary period for negotiations.<sup>9</sup> Instead, the voluntary and mandatory periods for negotiation should be tied to the dates on which MSS licenses are granted and should be related to the actual implementation schedules for the MSS systems to be operated in the 2 GHz MSS bands.

Once a long-term digital BAS channelization plan and 2 GHz MSS licenses are issued, Constellation recommends that a period of time be provided for the BAS industry and MSS licensees to negotiate a transition plan that minimizes the impact on both services. Such a transition plan could include interim or transitional channelization plans and geographical plans based on the level of demand for BAS and MSS services in any particular market.

The principles under which any cost compensation is determined for BAS should be modified from those in *Emerging Technologies* and *Microwave Relocation Cost-Sharing* decisions for several reasons.<sup>10</sup> First, the proposed BAS allocation is not new; rather it is included in the current allocation. There should be no liability for relocation costs in markets where the proposed allocation does not result in any reduction in spectrum access for existing licensees. Second, any cost formulas should be based simply on the conversion from analog to digital for the current capabilities of BAS equipment for analog NTSC signals. Relocation costs should not cover any increase in capability, such as support of high definition television or novel transmission scenarios. Third, the benefits to BAS licensees of the additional BAS channels available in congested areas should be taken into account and allocated to improved BAS conditions and not the entry of new MSS systems. Fourth, relocation cost reimbursements should be based on the minimum cost equipment and not include any additional features not required for operation under the new channelization plan. Fifth, MSS

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<sup>9</sup> Notice at ¶ 45.

<sup>10</sup> See Notice at ¶ 42.

licensees should have the option of deciding reimbursement for retuning/refitting under an interim plan until the sunset date, or conversion to the digital channelization plan depending on market conditions. For this reason, the Commission should require BAS licensees to disclose complete information to MSS licensees.<sup>11</sup> In addition to the information identified by the Commission, BAS licensees should indicate whether any mobile units are airborne.

Constellation believes that it is premature for the Commission to decide on specific criteria to gauge the acceptability of replacement BAS equipment.<sup>12</sup> While the Commission should reserve its right to do so, Constellation believes that additional information and discussions between BAS and MSS licensees are needed before any such criteria for acceptability of equipment can be adopted.

### **III. Fixed Service Re-Accommodation from the 2165-2200 MHz Band**

In the *Notice*, the Commission notes that MSS licensees are under no obligation to relocate fixed incumbents if sharing is feasible as a threshold matter.<sup>13</sup> At a minimum, Constellation requests the Commission to clarify the power flux density (PFD) levels that define this threshold. Such a threshold determination is particularly useful for CDMA MSS systems which may be able to design waveforms that can comply with such PFD limits. Of course, the criteria being developed under the auspices of the Telecommunications Industry Association<sup>14</sup> may be more precise and provide more flexibility in devising sharing strategies, particularly for other types of transmission techniques.

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<sup>11</sup> See *Notice* at ¶ 43.

<sup>12</sup> *Id.*

<sup>13</sup> *Id.* at ¶ 47.

<sup>14</sup> *Id.* at ¶ 49.

With respect to the sunset date<sup>15</sup> and dates for voluntary and mandatory negotiation periods,<sup>16</sup> Constellation believes that these dates should be set in the same fashion as that used to set dates for the BAS, as discussed above, and related to the dates on which MSS licenses are issued. Finally, Constellation believes that MSS applicants should not be responsible for relocation expenses if a relocation is caused because a fixed service radio channel in the MSS band is relocated as a result of the relocation of a paired band in a non-MSS band.

### CONCLUSION

As discussed above, Constellation urges the Commission in this proceeding to develop sound transition policies that meet the varying needs of the BAS, FS Microwave and MSS services.

Respectfully submitted,



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Robert A. Mazer  
Albert Shuldiner  
Vinson & Elkins L.L.P.  
1455 Pennsylvania Avenue, N.W.  
Washington, DC 20004-1008  
(202) 639-6500

Counsel for Constellation Communications, Inc.

Dated: January 19, 1999

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<sup>15</sup> *Id.* at ¶ 49.

<sup>16</sup> *Id.* at ¶ 50.



CERTIFICATE OF SERVICE

I HEREBY CERTIFY that on this 19th day of January, 1999, a true and correct copy of the foregoing Comments of Constellation Communications, Inc. was served by first class mail, postage prepaid, upon the following:

\* Ms. Regina Keeney  
Chief, International Bureau  
Federal Communications Commission  
2000 M Street, N.W., Room 830  
Washington, D.C. 20554

\* Ms. Fern J. Jarmulnek  
Chief, Satellite &  
Radiocommunication Division  
International Bureau  
Federal Communications Commission  
2000 M Street, N.W., Room 520  
Washington, D.C. 20554

\* Ms. Cassandra Thomas  
Deputy Division Chief, Satellite &  
Radiocommunication Division  
International Bureau  
Federal Communications Commission  
2000 M Street, N.W., Room 810  
Washington, D.C. 20554

Mr. Bruce D. Jacobs  
Mr. Glenn S. Richards  
Fisher, Wayland, Cooper,  
Leader & Zaragoza L.L.P.  
2001 Pennsylvania Ave., N.W.  
Suite 400  
Washington, D.C. 20006-1851  
Counsel for Personal  
Communications Satellite Corporation

Mr. Gregory C. Staple  
Koteen & Naftalin, L.L.P.  
1150 Connecticut Avenue  
Washington, D.C. 20036  
Counsel for TMI Communications  
and Company, Limited Partnership

\* Mr. Alex Roytblat  
International Bureau  
Federal Communications Commission  
2000 M Street, N.W., Room 502  
Washington, D.C. 20554

\* Mr. Harold Ng  
Engineering Advisor, Satellite  
& Radiocommunications Division  
International Bureau  
Federal Communications Commission  
2000 M Street, Room 801  
Washington, D.C. 20554

\* Mr. Thomas S. Tycz  
Division Chief, Satellite &  
Radiocommunication Division  
International Bureau  
Federal Communications Commission  
2000 M Street, N.W., Room 520  
Washington, D.C. 20554

Mr. Paul J. Sinderbrand  
Mr. William W. Huber  
Wilkinson, Barker, Knauer  
& Quinn, L.L.P.  
2300 N Street, N.W.  
Washington, D.C. 20037-1128  
Counsel for The Wireless Cable  
Association International, Inc.

Mr. John C. Quale  
Ms. Antoinette Cook Bush  
Skadden, Arps, Slate,  
Meagher & Flom L.L.P.  
1440 New York Avenue, N.W.  
Washington, D.C. 20005-2111  
Counsel for Celsat America, Inc.

\*By Hand Delivery

Ms. Cheryl A. Tritt  
Mr. Charles H. Kennedy  
Ms. Sheryl J. Lincoln  
Morrison & Foerster L.L.P.  
2000 Pennsylvania Avenue, N.W.  
Washington, D.C. 20006-1888  
Counsel for ICO Services Limited

Mr. Joseph P. Markoski  
Mr. Herbert E. Marks  
Mr. David A. Nall  
Mr. Bruce A. Olcott  
Squire, Sanders & Dempsey L.L.P.  
1201 Pennsylvania Avenue, N.W.  
P. O. Box 407  
Washington, D.C. 20044-0407  
Counsel for The Boeing Company


Mr. Warren Grace  
Director General  
Inmarsat  
99 City Road  
London EC1Y 1AX  
United Kingdom

Mr. William Wallace  
Crowell & Moring  
1001 Pennsylvania Avenue, N.W.  
Washington, D.C. 20004-2505  
Counsel for Globalstar, L.P.

Mr. Thomas J. Keller  
Mr. Julian L. Shepard  
Mr. Eric T. Werner  
Verner, Liipfert, Bernhard,  
McPherson, and Hand, Chartered  
901 - 15th Street, N.W., Suite 700  
Washington, D.C. 20005-2301  
Counsel for Iridium L.L.C.

Ms. Jill Abeshouse Stern  
Sr. Vice President and General Counsel  
Mr. Gerald B. Helman  
Vice President, International and  
Governmental Affairs  
Mobile Communications Holdings, Inc.  
Two Lafayette Center  
1133 Twenty-first Street, N.W.  
Washington, D.C. 20036

Mr. Mark A. Grannis  
Harris, Wiltshire & Grannis L.L.P.  
1200 Eighteenth Street, N.W.  
Washington, D.C. 20036  
Counsel for Teledesic LLC

  
\_\_\_\_\_